

Q84 and Tables 9 and 10 above.

A three-dimensional (3-D) simulation model was used to simulate an in situ conversion process for a tar sand formation. A heat injection rate was calculated using a separate numerical code (CFX). The heat injection rate was calculated at 500 watts per foot (1640 watts per meter). The 3-D simulation was based on a dilation-recompaction model for tar sands. A target zone thickness of 50 meters was used. Input data for the simulation were as follows:

Depth of target zone = 280 meters;
Thickness = 50 meters;
Porosity = 0.27;
Oil saturation = 0.84;
Water saturation = 0.16;
Permeability = 1000 millidarcy;
Vertical permeability versus horizontal permeability = 0.1;
Overburden = shale; and
Base rock = wet carbonate.

Six component fluids were used based on fluids found in Athabasca tar sands. The six component fluids were: heavy fluid; light fluid; gas; water; pre-char; and char. The spacing between wells was set at 9.1 meters on a triangular pattern. Eleven horizontal heaters with a 300 m heater length were used with heat outputs set at the previously calculated value of 1640 watts per meter.

In The Claims:

Please cancel claims 1-4090 and 4171-5395 without prejudice.

Please add the following claims:

985
EB
5396. (New) The method of claim 4157, wherein at least about 20 heat sources are disposed in the formation for each production well.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley, Rose & Tayon, P.C. Deposit Account Number 501505/5659-08200/EBM.

Respectfully submitted,



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Date: 9/28/01